REMARKS

At the outset, applicants wish to thank Primary Examiner Arthur Corbin for the courtesies extended during the personal interview held on December 8, 2003 with the undersigned attorney. The Primary Examiner's careful attention to the application on that occasion is sincerely appreciated.

Claims 1-10 were rejected under 35 USC §103(a) as being unpatentable over SUGISAWA et al. 4,585,660. The Official Action states that this primary reference discloses steam blanching potato pieces by heating in steam at a temperature of about 100°C and under a raised pressure. A decompression step follows which results in expansion of the potato pieces. Subsequently, the potato pieces are fried resulting in drying of the potato pieces. The fried product is then cooled at room temperature. It is concluded that it would have been obvious that the expansion of the potato pieces results in some physical modification of the potato surface, since the surface skin will be disrupted upon expansion. It is further advanced that finding the optimum pressure drop or decompression parameters as recited in claims 4-9 would require nothing more than routine experimentation by one having reasonable skill in this art.

Reconsideration of the above rejection is respectfully requested for the following reasons.

As was explained during the interview, the SUGISAWA et al. reference describes a process having the following steps:

a) heating the foodstuff at a temperature T_1 at a relatively high pressure;

b) lowering the pressure;

c) frying the foodstuff at the same temperature T_1 of step a);

d) restoring the pressure, etc.

This patented reference also describes the process for a starch-containing foodstuff, Example 6 probably being the closest to the herein claimed invention.

When comparing the two processes, step a) of SUGISAWA et al. would correspond to the present blanching step;

step b) would correspond to the present pressure drop step;

step c) would correspond to the present partial frying step; and

step d) has no corresponding step in the present process.

It follows that the differences between the SUGISAWA et al. process and that of the herein claimed invention are numerous and substantial. Specifically,

- the heating step a) of SUGISAWA et al. is preferably performed in oil (see column 3, lines 16-19 and all the

examples), whereas the present blanching step commonly implies the use of water in order for the required gelatinization and leaching to occur (see page 2, lines 29-31 of the present specification); the heating step a) of SUGISAWA et al. will not necessarily result in gelatinization;

- restoring the pressure (step d)) is performed before the frying step in the present process, whereas it is performed after the (partial) frying step in the SUGISAWA et al. process;

- no drying step is inserted between the pressure drop and the (partial) frying step of SUGISAWA et al., in contrast to the present process;

- in connection therewith, the foodstuff has a relatively low water content in the pressure step of SUGISAWA et al., as Example 6 thereof shows a water content of 11.5%, whereas a relatively high water content is necessary in the present process in order to allow the pressure drop to result in physically modifying the surface structure; a minimum water content of 35% is specified at page 3, line 20 and is recited in applicants' claim 1;

- the high pressure step and the low-pressure frying step are carried out at the same temperature in the SUGISAWA et al. process, whereas the blanching step and the partial frying step of the present invention have different temperatures since no effective blanching occurs at a temperature higher than 100°C

(see page 2, line 30), and no effective frying occurs at a temperature lower than 135°C (see page 3, line 1); step a) according to SUGISAWA et al. is not intended as a blanching step, but rather as a preparation to the later drying (frying) step (see column 4, lines 21-22); and

- the decompression step according to SUGISAWA et al. is not intended to produce physical modification of the surface, and mostly will not produce such modification because of the low water content; rather, it is intended to prepare for the drying/frying step and in some foods, for an expansion of the food (see column 4, lines 22-25).

It follows that there is simply no reason, motivation or suggestion in SUGISAWA et al. to insert a pressure drop step between the blanching and partial frying steps of the process of frying starch-containing foodstuff.

Nevertheless, in order to advance prosecution of this application, and as is reflected in the Examiner Interview Summary Record, claim 1 has been amended so as to specify that the gelatinized starch-containing foodstuff is subjected to steam treatment at a pressure of at least 5 bars followed by surface treatment comprising a pressure drop of at least 2.5 bars at elevated temperature, between the blanching and partially frying steps, the pressure drop being sufficient to physically modify the surface structure of the gelatinized starch-containing

foodstuff and being applied at a water content of the starch-containing foodstuff of at least 35%.

As is demonstrated by the accompanying 37 CFR §1.132 Declaration, samples made from potato varieties Bintje having an average weight in water of 425g/500g with a dry matter content of 22.9%, and Agria having an average weight in water of 393g/500g and a dry matter content of 21.3% were subjected to steam treatment between the blanching and partially frying steps. The conditions applied were 0 (no treatment), 2.5, 5.0 and 10 bars overpressure. The overpressure was applied for 10 seconds, after which an immediate pressure drop (within 1-2 seconds) was conducted.

A trained objective panel of 11 individuals evaluated treated and untreated samples of potato French fries presented at random and without any information to the panelists on the conditions of processing. The samples were taken from two out of three lots, mixed and then fried in hardened palm fat at 180°C for 2 minutes (finish-frying). The panelists scored the samples on a preset number of attributes a) within 1 minute after finish-frying, and b) after a holding time of 10 minutes after finish-frying. The products were judged for surface and kernel attributes, wherein crispness refers to the crispness of the surface only, in contrast to hardness which refers to hardness of

the surface and the kernel. The results are set forth in tabulated form on page 3 of the declaration.

From the results, it is readily apparent that at an overpressure steam treatment at 2.5 bars, the Bintje type of potato had a better overall crispness score than one that was not subjected to steam treatment. And at 5 bars, both the Agria and Bintje types of potatoes had significantly improved crispness scores.

The Primary Examiner's attention is also respectfully directed to Examples 1 and 6-8 of the specification which equally support the findings of the 37 CFR §1.132 Declaration. Specifically, two independent product experts concluded that:

1) on a basis of equal finish-frying time (2 min. 30 sec.):

steamed samples (according to the invention) were judged as significantly crispier, immediately after finish-frying as well as after 10 minutes of holding time.

2) on a basis of equal FFDM content (45% on total mass):

although immediately after finish-frying two product experts found no difference in crispness between the steamed sample and the two stage dried sample, the latter lost most of its rigidity after a holding time of 10 minutes, whereas the

steamed samples (invention) still demonstrated a texture almost as crispy and rigid as directly after finish-frying.

During the interview, as is reflected in the Interview Summary Record, an agreement was reached in that claim 1 as amended herein was indicated to appear to patentably distinguish from the SUGISAWA et al. reference.

In view of the recent interview, the present amendment, the accompanying 37 CFR §1.132 Declaration, and the foregoing remarks, therefore, it is believed that this application has been placed in condition for allowance. Entry of the present amendment, reconsideration and allowance are accordingly earnestly solicited.

In the event that there are any questions relating to this amendment or to the application in general, it would be appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that the prosecution of this application may be expedited.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any

overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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